

***Lucas DeBard and Payton Gallardo: The Great American Songbook***

*An exploration of the music from then by the musicians of now*

**An Honors Thesis (MMP 430)**

**by**

*Charles Cummings*

**Thesis Advisor**

*Dr. Christoph Thompson*

**Ball State University  
Muncie, IN**

**April 2018**

**Expected Date of Graduation**

**May 2018**

SpColl  
Undergrad  
Thesis  
LD  
2489  
.Z4  
2018  
.C86

## Abstract

Popular music has been defined by each generation in a different way. The idea of popularity in music is constantly evolving. There is a specific era of music, however, that has defined and impacted the evolution of music in the United States for generations. The Great American Songbook is not an actual songbook, but rather a compilation of music from the era of the early to mid-1900's that has stood the test of time and remained popular. This thesis project is a coordination between the artists and myself to represent some of the music from the Great American Songbook. This creative project is a recording of six songs of the era from a three-piece jazz band and two vocalists. My hope is that the use of single-room recording techniques and creative licensing conveys the sound of the music as it was intended by the original writers, but also revitalizes a sound that has been so defining for generations of American musicians.

## Acknowledgements

I have quite a few people to thank for their contributions to this project. I must first thank Chris Lewis, from the Great American Songbook Foundation at the Center for the Performing Arts in Carmel, Indiana. I interned at the Foundation as a high school student, and he helped to drive me towards this topic. I would also like to thank my advisor, Dr. Christoph Thompson, for advising me on various recording techniques, and providing helpful insight throughout the recording, editing, mixing, and mastering process. I would like to thank Jordan Lewis and Madison Lyon, who helped with the concept of the album and the actual recording process. I would also like to thank Dr. John Emert, for steering me in the right direction, and generally being a guide over my four years here. Finally, in a much more abstract way, I would like to thank all of those that helped steer me towards a career in music and my four years at Ball State. It was a long journey, and I'm thankful to those who made it possible and the people who made it seem possible to a teenager who was very unsure of himself.



## Process Analysis Statement

The idea for my project came before I even had a class associated with it. As a high school senior, I had the opportunity to intern at the Great American Songbook Foundation at the Center for the Performing Arts in Carmel, Indiana. While there, I managed their social media profile and helped with the office work, especially during their Songbook Academy, a weeklong intensive for high school singers.

My original idea was to work in conjunction with my capstone requirement for Music Media Production to create an album of songs from the Great American Songbook, a collection of popularized music from the early to mid 1900's in the United States, with winners of the Songbook Academy. The goal of the Foundation is to teach the music of then to the musicians of now to preserve that legacy. I think that this release is a wonderful addition to that goal since, at this point in the Foundation's growth, they do not have a product to market aside from tickets to live events.

At the beginning of the school year, the foundation had to shift a little bit. I applied and was accepted into a collaborative project with the Virginia Ball Center as credit for my MMP capstone. Luckily, I could convert the project to another MMP requirement, MMP 430.

I started planning the project over the summer, starting by contacting my former boss at the Foundation, Chris Lewis. He put me in contact with Lucas DeBard, a former winner of the Songbook Academy and current student at Indiana University. Lucas generously agreed to come up to Ball State in August to record three songs from the Songbook. I put together a trio of Ball State music students on drums, piano, and bass, and we got the ball rolling.

My personal goal for the project was to blend modern recording and post production techniques with techniques of the era. To achieve that goal, I recorded the entire ensemble in a single studio, isolating each instrument by microphone placement. I started by listening to Etta James and Keith Jarrett as a reference. I recorded the bass with a ribbon microphone, which is to say that it receives signal at 0 and 180 degrees. It rejects sound at 90 and 270 degrees. I used that rejection to isolate the bass from the drums, the loudest instrument in the room. Even though the drums are only about 5 feet away, they're at 90 degrees to the bass mic and do not "bleed" excessively. I used the Glyn Johns recording method for drums. That means that I put a mic on the snare and kick drum, but placed my overheads so each pointed at the snare from the same distance away. One pointed straight down at the snare. The other pointed at it from the side. The combination of the mics picks up the entire kit very well. I had some "bleed" issues in the overheads because I placed them a little too high, but the overall sound worked well. I used two omni-directional microphones inside the piano with the lid partially closed and a blanket on top. This allowed the mics to pick up the piano without too much unnecessary bleed from the other instruments. The vocalist was captured with a cardioid microphone placed three inches away from the face. In addition to the careful placement of the microphones, I also deployed sound dampening panels and curtains across the room to reduce the amount of "room" that the microphones heard.



I recorded these instruments through the Rupert Neve 5088 analog mixer in Studio Two through a set of eight Grace preamplifiers<sup>1</sup> and a Sweet 10 preamplifier for the vocal. I did this all again with my second artist, Payton Gallardo. Payton was a student at Ball State studying vocal performance, both classical and jazz. She is familiar with the Great American Songbook because many of her recital hour performances consisted of music of the era and she had the opportunity to perform with multiple BSU jazz ensembles.

The first phase of my project was simply recording or “tracking” the 6 total songs. Once I completed that, I submitted it for a grade and comments from my professor on the recording technique. I received a 90. Then, I moved on to mixing the project. I decided that, while it would be cool to use vintage analog gear to mix the project, I was not experienced enough to do so without the possibility of an irreversible mistake<sup>2</sup>. That made me nervous. Instead, I decided to mix in the software Digital Audio Interface (DAW) ProTools.

Mixing is complicated. It consists of both editing raw recorded audio, like piecing together parts of different takes to make the best overall product, as well as shaping the sound through processing units called plug-ins. Each genre of music has its standards, but, in a mix, no two songs are the exact same. In fact, I would argue that mixing in this genre was more difficult for me, because it requires a minimalist approach. The music of this era came from a time when recording was the entire process. There was no fancy audio editing, pitch correction, time alignment, etc. The live recording was the final project. I wanted to preserve that. To do so, I tried to make small, careful adjustments to a limited number of plug ins. In addition, only two of the tracks are pieced together from multiple vocal takes. All of the others are single-take recordings.

Each song included 9 microphones: Two kick mics, a snare mic, two drum overhead mics, two piano mics, one bass mic, and one vocal mic. Nine microphones means that there are nine channels of audio that require attention. I started by checking the phase alignment of each of the microphones<sup>3</sup>. Then, I applied a parametric equalizer (EQ) plug-in to each channel<sup>4</sup>. I carved out the unused frequencies of each instrument, and did added a little bit to the high end<sup>5</sup> to piano clearer. I also added an exciter to the bass, which allowed the attack of the plucked string to be heard better.

The vocal is in a world of its own. While a truly accurate historical recording would not have included the following, I felt that it was necessary to improve the overall recording quality as well as blend the worlds of old music with new performers. I added EQ to the vocal channel to

---

<sup>1</sup> A preamplifier amplifies the recorded sound so that it can be heard. The amount of electrical current created by a microphone’s diaphragm being vibrated is very small.

<sup>2</sup> When recording with analog gear, you must dial in the settings you want, and then re-record over the existing material.

<sup>3</sup> Phase alignment means that the sound is hitting multiple microphones at the same time. Sometimes the sound is out of phase, especially in stereo mics like with the drum kit or piano. That can cause a dampened or less-vibrant sound.

<sup>4</sup> An equalizer is a tool that allows how much of various frequencies it will allow to pass.

<sup>5</sup> 10,000-20,000 Hz



take some of the “bite” out between 2,000 and 5,000 Hz. I cut out the unused low end<sup>6</sup> and brightened up the high end just a little bit. Then, I duplicated the channel. In this second channel, I added an aggressive compressor<sup>7</sup>. I did not want to lose the resonance of an unaltered human voice, which is why I did it in a separate channel. Then, I mixed the compressed vocal in softer than the main vocal to control dynamics just a little bit, add consistency to the sound, and make the vocal cut through the mix without harming the sound of the voice. It is a technique called parallel compression.

To conclude the mixing process, I added a vocal delay and a room reverb unit in aux busses<sup>8</sup>. The first, I used a delay plug in to bolster the sound of the vocal a little bit more. I mixed in very little of it. The room reverb has sends from all the microphones. It essentially includes a reverb unit that dictates the amount of time for reverberant sound, which was about 1.5 seconds, along with early reflections. I used it to make it sound like the band was all playing together, in a stage rather than in a studio. When I was done mixing, I submitted that for a great, for which I also received a 90 percent.

Finally, I began mastering. Mastering is the process of making the audio meet certain loudness criteria to be distributed, as well as cleaning up the audio in a concise way for an album release. I did so in Studio One, another Digital Audio Interface. I chose to move from the original to use Studio One’s mastering feature, which allows me to switch between songs at will without closing the program, and allows plugins to be enabled for multiple tracks at once.

I applied an equalizer to each song, which was simply to brighten the sound a little bit. I used a compressor, not to compress the audio, but to push the volume upward. I also added a multiband compressor<sup>9</sup>. I used that to crush some of the annoying frequencies between 2,000 and 5,000 Hz. Then, I used a stereo imager plug-in to “widen” the sound of the recording. Finally, I included a limiter<sup>10</sup> to make sure that the audio did not “clip” or cause unnecessary distortion. I then submitted two copies of the mastered files for a grade. The first was submitted at the acceptable levels for release on iTunes. The second, was submitted at slightly lower capacity to be released on a CD. The submission also received a 90. That concluded the portion of the project directly attributed to MMP 430: Production Workshop. The goal of that project was to plan, record, mix and master six songs.

My personal goals expanded beyond that. I was working with two excellent singers and a stellar band, and I thought that their work deserved to be heard by more than just my professor and my classmates. So, once the project was completed, I moved on to the process of releasing the music. Technically, the studios own the copyright to the sound recordings created in the studios, so I filled out the form to reacquire the sound recording copyright.

---

<sup>6</sup> 20-100 Hz

<sup>7</sup> A compressor is a tool that helps to control the dynamic changes of a microphone. It “crushes” the sound to make the soft sounds louder and the loud sounds softer.

<sup>8</sup> Busses are channels that you can send a certain amount of signal though at your discretion.

<sup>9</sup> A compressor that targets specific ranges of frequencies like an EQ does.

<sup>10</sup> A plug-in that cuts off the audio at a certain volume threshold.





Then, I worked with my friend who does some graphic design work to come up with an album cover, shown below. Finally, I used a site called SoundDrop to license and release the album across a variety of services. I paid for each song's license. Once the site had processed the works, I set a release date in January for Spotify, Apple Music, iTunes, Amazon, and Google Play.



Now, as I am writing my final thoughts down on this project, I am coming to the close of this project. I am so grateful for the members of the band that agreed to play for me, and all the preparation that came along with it. I am grateful for the two stellar singers that picked out repertoire and took the time to come to Muncie to record. I am grateful to my advisor for taking

the time to teach me and the rest of the class about different aspects of recording, and for giving me some specific tips on acquiring a good acoustic recording in one room.

As with any project, listening and thinking about it now, there are some things that I would have done differently. It's my nature to continue thinking about microphone choices, preamps, even placement and the mix. Nevertheless, I am proud of the final project, and I think that it was a fitting way to begin to wrap up my college career. I think that this project incorporated many of the skills that I have spent time studying and practicing over the past three and a half years. Perhaps more importantly, I think that this project demonstrates my ability as a competent student, and, in a few months, a competent professional.

### **Thesis**

See attached CD.

## Works Referenced

- Etta James. "At Last." *At Last!*, 1960. Spotify,  
<https://open.spotify.com/track/4Hhv2vrOTy89HFRcjU3QOx?si=00y5P1DQRMORZu7P3E68RA>
- Izhaki, Roey. *Mixing Audio: Concepts, Practices, and Tools*. 2<sup>nd</sup> ed., Routledge, 2015.
- Katz, Robert A. *Mastering Audio: The Art and The Science*. Focal Press, 2015.
- Keith Jarrett. "While We're Young." *At the Blue Note: The Complete Recordings*, ECM, 1994.  
Spotify, <https://open.spotify.com/track/0KfL6cBKaCAxK70RhIfmq?si=Lo4-H3qvTPGw1P0ZGFipJw>
- Lucas DeBard. "I'll See You in My Dreams." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/5azGBwhxe8R2Y2Fd3hcy3s?si=xbwF3SJVTyuADw5AY5Rgwa>
- Lucas DeBard. "My Mother's Eyes." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/2yOAeZbAx67VGw4cKySQDQ?si=A-Ide0rwShyMyh9a6jqkBw>
- Lucas Debard. "You and the Night and the Music." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/1VHnFeapw2ST801UOUBrns?si=a1Vr2SvsRbiT40c-8Bdrg>
- Payton Gallardo. "Georgia on My Mind." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/7FtXM68ediTmdYBWidfM5g?si=85yOQLAURvexFws mFQRLfg>
- Payton Gallardo. "No Greater Love." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/7fqlD4TOQ5pPaIRnffvypG?si=-dD6KPFoRY2bxJB5PH2CcA>
- Payton Gallardo. "Summertime." *Lucas Debard and Payton Gallardo: The Great American Songbook*, 2018. Spotify,  
<https://open.spotify.com/track/2qrStVG4f2ClxsWcSVR9Q?si=FlwaLCa7TFur51FQeRBQhQ>